

## Notice of Allowability

Application No.

09/645,646

Examiner

Hai Vo

Applicant(s)

HAYASHI ET AL.

Art Unit

1794

### -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1199.

1. ☒ This communication is responsive to the amendment filed 08/02/2007.
2. ☒ The allowed claim(s) is/are 101-103, 107, 110-123, 125-130, 132, 133, 135 and 136.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of the:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

### THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20071004.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Douglas P. Mueller on 10/04/2007.

The application has been amended as follows:

***The claims:***

125. (Currently Amended) The electric-eraser of claim ~~434~~ 132, wherein at least one of the porous structural material and the elastic material is colored.

126. (Currently Amended) The electric-eraser of claim ~~434~~ 132, wherein the skeleton structure is constituted by a plurality of blocks of porous structural materials.

127. (Currently Amended) The electric-eraser of claim ~~434~~ 132, wherein the skeleton structure is constituted by a plurality of blocks of porous structural materials, and the blocks have at least one shape selected from the group consisting of spherical, polygonal, and plate shapes.

128. (Currently Amended) An eraser for erasing information, comprising:

a skeleton structure constituted by a skeleton portion and a void portion; and an eraser-base material filled in the void portion,

wherein the skeleton portion of the skeleton structure is constituted by a porous structural material of organic polymer consisting ~~essentially~~ of melamine-based resin,

the skeleton portion of the skeleton structure has an average thickness from 1  $\mu\text{m}$  to 100 $\mu\text{m}$ , and the void portion of the skeleton structure has an average pore size of 20  $\mu\text{m}$  to 3 mm,

the eraser base material is selected from the group consisting of (a) a plastic-based eraser composition, (b) a rubber-based eraser composition, and (c) an elastomer-based eraser composition, and

Art Unit: 1794

- (a) the plastic-based eraser composition comprises at least one of a vinylchloride resin and a vinylacetate resin, and comprises a filler,
- (b) the rubber-based eraser composition comprises a rubber component, factice, sulfur, a vulcanizing accelerator, and a filler,
- (c) the elastomer-based eraser composition comprises a thermoplastic elastomer and a filler.

132. (Currently Amended) An electric-eraser comprising:

an eraser holder; and

an eraser for erasing information, the eraser being attached to the holder, the eraser comprising:

a skeleton structure constituted by a skeleton portion and a void portion; and  
an eraser-base material filled in the void portion,

wherein the skeleton portion of the skeleton structure is constituted by a porous structural material of organic polymer consisting ~~essentially~~ of melamine-based resin,

the skeleton portion of the skeleton structure has an average thickness from 1  $\mu\text{m}$  to 100 $\mu\text{m}$ , and the void portion of the skeleton structure has an average pore size of 20  $\mu\text{m}$  to 3 mm,

the eraser base material is selected from the group consisting of (a) a plastic-based eraser composition, (b) a rubber-based eraser composition, and (c) an elastomer-based eraser composition, and

- (a) the plastic-based eraser composition comprises at least one of a vinylchloride resin and a vinylacetate resin, and comprises a filler,
- (b) the rubber-based eraser composition comprises a rubber component, factice, sulfur, a vulcanizing accelerator, and a filler,
- (c) the elastomer-based eraser composition comprises a thermoplastic elastomer and a filler.

**Cancel** claims 137 and 138.

***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance: Note that the examiner's amendment is sufficient to overcome the art rejections and sufficient to place the claims in condition for allowance.

Of the references of record, the most pertinent are Toyosawa et al (US 5,716,997) and von Bonin et al (US 4,992,481).

Toyosawa teaches a polymeric reticulated structure comprising a three-dimensional continuous network having strands of the copolymer connected to define internal cells communicating with each other, and the cells filled with a functional material such as a thermoplastic or thermosetting resin (column 12, lines 33-37 and figure 1). The cells have a circular cross section as shown in figure 1. The cells have an average diameter from 1 to 50 microns (column 5, line 26). The cells have a wall thickness from 0.5 to 5 microns within the claimed range (column 5, line 25). The Toyosawa polymeric reticulated structure requires a copolymer consisting essentially of ethylene and propylene or a thermoplastic block copolymer having a crystalline ethylene block at one end or both ends. The limitation "consisting of" excludes the polymeric reticulated structure from having the copolymer consisting essentially of ethylene and propylene or the thermoplastic block copolymer having a crystalline ethylene block at one end or both ends.

von Bonin teaches a sealant member comprising a reticulated foam impregnated with a plasticized latex of polyvinyl chloride or polyvinyl acetate (column 6, lines 30-32, and 54-56; column 4, lines 25-30). The reticulated foam is a polyurethane foam, a

Art Unit: 1794

melamine resin foam (column 4, lines 10-17). Toyosawa discloses that the ethylene-propylene copolymer or the thermoplastic block copolymer having a crystalline ethylene block at one end or both ends is required for achieving a reticulated foam with the combination of a particular cell size and particular strut diameter (tables 1 and 2). There is no guidance or teaching just how von Bonin could be modified by Toyosawa to provide the melamine resin foam that has a combination of a pore size of 20  $\mu\text{m}$  to 3 mm and a strut diameter from 1  $\mu\text{m}$  to 100  $\mu\text{m}$  as required by the claims. Accordingly, the combined teachings of von Bonin and Toyosawa do not establish a *prima facie* case of obviousness.

Note that the provisional obviousness-type double patenting rejection against the US application 11/603,794 is precluded in view of the restriction made on 08/23/2006.

Note that, none of the cited art, alone or in combination, teaches or suggests an eraser having the recited structures. Accordingly, the instant claims are deemed allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485.

Art Unit: 1794

The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV

/Hai Vo/  
Primary Examiner, Art Unit 1794